

Appendix A

NSA Mapping of Level to Job Task Analysis

Level 3	Level 2	Level 1	Task
			Manage System Hardware
3			Plan hardware installation
3			Acquire hardware
3			Coordinate network installation
	2		Schedule preventative maintenance
	2		Coordinate hardware repair
		1	Install hardware
		1	Boot system
		1	Maintain inventory of system hardware
		1	Order consumable supplies
		1	Run diagnostics
		1	Relocate hardware
			Manage System Software
3			Optimize operating system parameters
3			Plan system changes
	2		Set system defaults
	2		Generate new operating system kernel
	2		Maintain system start-up and shutdown procedures
	2		Maintain command files
	2		Test validity of updates
		1	Install system software
		1	Shut down system
		1	Reboot system
		1	Maintain inventory of system software
		1	Install system changes
		1	Install vendor specific software
		1	Install system updates or patches
		1	Maintain documentation
			Maintain Data Store
3			Plan data storage layout
3			Plan backup procedures
	2		Implement backup procedures
	2		Monitor data storage utilization
	2		Maintain integrity of the file system
	2		Audit file system security ¹
	2		Delete unnecessary files

¹ Working in conjunction with the ISSO

Level 3	Level 2	Level 1	Task
	2		Manage log files
	2		Maintain data storage layout
		1	Format media storage
		1	Partition disks
		1	Create a file system
		1	Load data
		1	Restore data from a backup
			Manage Application Software
3			Evaluate impact of software packages
3			Optimize application parameters
3			Plan application changes
	2		Ensure compatibility among applications
	2		Allocate system resources to applications
	2		Validate integrity of applications before installation
	2		Test validity of software installation
		1	Install application software
		1	Maintain inventory
		1	Maintain application documentation
		1	Install application updates
			Provide Communication Connectivity
3			Plan network configuration
	2		Request interhost connectivity
	2		Acquire Internet address
	2		Build network tables
	2		Configure TTY lines
	2		Configure peripheral lines
	2		Configure file servers and clients
	2		Configure firewalls ²
	2		Monitor network activity
	2		Manage network services
	2		Manage network bridges and routers
	2		Manage print servers
	2		Manage terminal servers
	2		Manage network topology
		1	Assign addresses to nodes
		1	Install network software
		1	Set access permissions
		1	Start network software
		1	Test communication connectivity
		1	Stop network software

² In coordination with the ISSM or ISSO

Level 3	Level 2	Level 1	Task
		1	Re-establish host connectivity
			Ensure Security³
3			Help establish audit guidelines
3			Help establish user security guidelines
3	2		Assist writing system security plans
3	2		Assist in host network accreditation
	2		Ensure output labeling procedures
	2		Ensure data labeling procedures
	2		Assist testing security mechanisms
	2		Assist in analysis of audit trails
	2		Assist in incident handling
3	2	1	Enforce security procedures
		1	Assist in maintaining physical security for the system
		1	Assist in maintaining device access controls
3	2	1	Report security incidents
			Manage Accounts
3			Plan account management strategy
	2		Establish user login environments
	2		Assist in managing mandatory access controls ⁴
	2		Manage account privileges
	2		Audit account activity ⁵
	2		Manage resources used by accounts
		1	Add new accounts
		1	Assist in setting the account's access control list ⁶
		1	Explain basic operating procedures
		1	Assist in modifying passwords ⁷
		1	Delete accounts
			Interact with Others
3			Make recommendations to management
3	2	1	Coordinate with other systems administrators
3	2		Participate in working groups
3	2		Present briefings
3	2		Delegate responsibility
	2		Train users

³ In coordination with the ISSM or ISSO

⁴ Working in conjunction with the ISSO

⁵ This is an operations activity audit, not a security audit

⁶ Working in conjunction with the ISSO

⁷ Working in conjunction with the ISSO

Level 3	Level 2	Level 1	Task
	2		Generate working aids
	2		Interact with system support personnel
	2		Interact with hardware support personnel
	2		Interact with software developers
	2	1	Interact with vendors
3	2	1	Communicate with ISSM/ISSO
	2		Communicate with network operations centers
	2		Communicate with system operations centers
		1	Provide working aids
		1	Inform users of system status
		1	Handle user calls
			Troubleshoot Problems
	2		Recreate scenario
	2		Interpret error messages
	2		Test components
	2		Isolate problems
	2		Maintain log of problems and solutions
	2		Recover from system crashes
		1	Respond to user identified problems
		1	Gather information
		1	Use diagnostic tools
		1	Initiate corrective action
			Maintain expertise
3	2	1	Explore system capabilities
3	2	1	Interpret technical manuals
3	2	1	Attend classes
3	2	1	Participate in peer groups
3	2	1	Read journals
3	2	1	Attend seminars and conferences